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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,613	02/15/2002	Arnab Das	16-20	2876
30594	7590	01/13/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			DOAN, PHUOC HUU	
			ART UNIT	PAPER NUMBER
			2687	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/077,613

Applicant(s)

DAS ET AL.

Examiner

PHUOC H DOAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's arguments on dated 08/23/04 have been fully considered but they are not persuasive.

On page 8 of applicant's remarks that claims 1 through 20 require the transmission of a plurality of control and signaling information between a base station and one or more mobile stations by modifying one or more prescribed fields in an existing control to carry the plurality of control and signaling information directly between the base station and at least one mobile station. Such a transmission is referred to as "express signaling." In contrast, Bolourchi does not disclose or suggest the transmission of a plurality of control and signaling information to a base station and one or more mobile stations, among other things, as in the claims of the present invention. Rather, Bolourchi only discloses the transfer of a mobile station identification (ID) between a node and user equipment (UE). Bolourchi does not disclose or suggest the transmission of a plurality of control and signaling information because Bolourchi is not aimed at solving the same problem as the present invention.

In response to Applicant's argument, Examiner disagrees. Bolourchi teaches plurality of control and information in page 4, par. [0052-0054], the plurality of ID and CRC in the SCCH-HS (control channels).

On page 9 of Applicant's remarks that in addition, Applicants note that with respect to claim 12, Bolourchi does not disclose or suggest a routing information identifier which comprises an explicit set of bits transmitted in a frame of an

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existing control channel. Instead, Bolourchi relies solely on the use of a CRC code to transfer a UE ID.

In response to Applicant's argument, Examiner disagrees, Applicant is referred especially in FIG. 4AB to page 4, paragraphs [0052-0059]. Bolourchi, the control message includes the UE ID (the claimed routing information identifier) and the message. Applicant should refer to paragraph [0043], the UE ID comprises an explicit set of M bits.

On page 9 of Applicant's remarks that further, with respect to claim 18, Bolourchi does not disclose or suggest the transmission of routing information which is derived via a logical, exclusive OR operation performed on an explicit set of bits and a CRC code.

In response to Applicant's argument, Applicant should refer to page 3, paragraphs [0042-0043], Bolourchi teaches modulo 2 (EX OR) for the CRC.

On pages 9 through 10 of Applicant's remarks that as the Office Action indicates, Bolourchi does not disclose or suggest the transmission of an identifier which indicates an available Walsh space, as in claim 11. To make up for this deficiency, Examiner relies on Willenegger. Initially, Applicants respectfully submit that claim 11 is dependent on claim 1 and is therefore patentable over Bolourchi, taken separately or in combination with Willenegger, for at least the reasons cited before. In addition, Applicants respectfully submit that the combination of Bolourchi and Willenegger does not render obvious claim 11 of the present invention because neither Bolourchi nor Willenegger, taken separately or in combination, suggests the inclusion of an identifier which

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indicates an available Walsh space in an existing control channel along with a plurality of other control and signaling information that is transmitted directly between a base station and one or more mobile stations, as in claim 11 of the present invention. Instead, Bolourchi only appears to disclose the sending of a mobile station ID between a base station and a mobile station, while Willenegger discloses the conventional transmission of a Walsh function over a shared channel. Accordingly.

In response to Applicant's argument, Examiner disagrees. The SCCH-HS of Bolourchi are shared control channels, see page 1, paragraph [0007], and Willenegger discloses transmission of a Walsh function over the shared channel. Therefore, the combination do teach the limitation of claim 11.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim **1-10,12-20** are rejected under 35 U.S.C. 102(e) as being anticipated by Bolourchi et al (US Pub No. US 2002/010013).

As to claim 1, Bolourchi et al teach a method for transmitting a plurality of control information between a base station (Node) and one or more mobile stations (UE) in a wireless communication network, the method comprising: modifying one or more prescribed fields (CRC, UE ID) in an existing control channel (SCCH-HS) to carry a plurality of control and signaling information directly between the base station and at least one mobile station Fig. 9, (page 4, paragraphs 52-60).

As to claim 2, Bolourchi et al teach the method according to claim 1, wherein the control and signaling information includes one or more identifiers (UE IDs), and wherein the one or more identifiers include information selected from the group consisting of routing information and message type, (page 4, paragraph 59).

As to claim 3, Bolourchi et al teach the method according to claim 2, wherein the routing information indicates the one or more mobile stations for which a transmission is intended, (page 4, paragraph 52).

As to claim 4, Bolourchi et al teach the method according to claim 3, wherein the plurality of control and signaling information comprises data 102 (Fig. 4B) and a signaling information (page 2, paragraph 34).

As to claim 5, Bolourchi et al teach the method according to claim 3, wherein the transmission is simultaneously transmitted (Fig. 8), (page 4, paragraph 52) and intended for a plurality of mobile stations (page 2, paragraph 37).

As to claim 6, Bolourchi et al teach the method according to claim 2, wherein the message type indicates a type of action to be carried out by a recipient mobile station (page 4, paragraph 52).

As to claim 7, Bolourchi et al teach the method according to claim 1, wherein the control and signaling information includes message address information Fig. 9, (page 4, paragraph 58) for a single mobile station.

As to claim 8, Bolourchi et al teach the method according to claim 1, wherein the control and signaling information includes common message address information Fig. 8, (page 4, paragraphs 58-59) for a plurality of mobile stations.

As to claim 9, Bolourchi et al teach the method according to claim 8, wherein the control and signaling information includes an identifier indicating a broadcast transmission (page 4, paragraph 52) to the plurality of mobile stations.

As to claim 10, Bolourchi et al teach the method according to claim 8, wherein the control and signaling information includes an identifier indicating a multicast transmission (page 4, paragraph 52) for a prescribed number of the plurality of mobile stations.

As to claim 12, Bolourchi et al teach the method according to claim 2, wherein a routing information identifier comprises an explicit set of bits transmitted in a frame (FIG. 4A-B, page 4, paragraphs 52-59) of the existing control channel.

As to claim 13, Bolourchi et al teach the method according to claim 1, wherein the existing control channel includes a message identification field 404, 412, (Fig. 7A) and a control field. See (page 4, paragraph 53).

As to claim 14, Bolourchi et al teach the method according to claim 13, wherein the control field includes the control and signaling information (page 4, paragraphs 53-60).

As to claim 15, Bolourchi et al teach the method according to claim 14, wherein routing information for a transmission is derived via a cyclic redundancy check (CRC) calculation Fig. 7A, (page 3, paragraphs 47-49) performed over the contents of the control field and a mobile station identifier.

As to claim 16, Bolourchi et al teach the method according to claim 15, wherein the transmission includes the mobile station identifier, the CRC calculation, and the control field (See page 3, paragraphs 48-49).

As to claim 17, Bolourchi et al teach the method according to claim 15, wherein the transmission includes the CRC calculation and the control field, and wherein routing information is derived at a receiving mobile station by performing a CRC calculation on the received transmission together (Fig. 7A, 7B) with the receiving mobile station's mobile station identifier (See page 4, paragraphs 50-53).

As to claim 18, Bolourchi et al teach the method according to claim 12, wherein routing information for a transmission is derived via an logical exclusive OR operation performed on a mobile station identifier and a

cyclic redundancy check (CRC) calculated on the contents of a control frame (page 4, paragraphs 50-53) in the existing control channel (See page 3, par. [0043-0045]).

As to claim 19, Bolourchi et al teach the method according to claim 13, wherein the message identification field comprises at least two parts, wherein a first part identifies a recipient mobile station for the transmission and wherein a second part indicates a message type (See page 4, paragraphs 58-60).

As to claim 20, Bolourchi et al teach a method for transmitting a plurality control and signaling information between a base station and one or more mobile stations in a wireless communication network, the method comprising: modifying one or more prescribed fields in an existing control channel to carry one or more prescribed message identifiers Fig. 4A, 4B, (pages 2-3, paragraphs 33-41) between the base station and the one or more mobile stations, wherein the one or more prescribed message identifiers comprise control and signaling information selected from the group consisting of routing information, message type (page 4, paragraphs 52-59), control information, and a signaling message Fig. 9, (page 4, paragraphs 58-60), whereby express signaling occurs directly between the base station and at least one mobile station Fig. 8, (page 4, paragraphs 52-54).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bolourchi et al in view of Willenegger (Pub. No. US 2002/0110181).

As to claim 11, Bolourchi et al fail to teach the express signaling information includes an identifier indicating available Walsh space for transmission of data between the base station and the one or more mobile stations. Willenegger teaches the express signaling information includes an identifier indicating available Walsh space (Walsh code sequences) for transmission 302, (Fig.3), (page 3, paragraph 28) of data between the base station and the one or more mobile stations (page1, paragraphs (0004-0008). Communications between a base station and each user are coded by a distinct Walsh code sequence in order to separate each user from the others (page 3, paragraph 28). Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the Walsh code sequence of Willenegger to the system of Bolourchi et al in order to separate each user from the orders (See page 3, paragraph 28).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUOC H DOAN whose telephone number is 703-305-6311. The examiner can normally be reached on 9:30 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LESTER G KINCAID can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phuoc Doan

Art Unit: 2687
01/09/05
SONNY TRINH
PRIMARY EXAMINER